Infiltration Calculations

1855 Saloon Grill
Cottage Grove, WI
7/23/2020

Average Annual Rainfall = 28.81 inches

Notes:

1.) Infiltration calculations are based on runoff volume outputs from WinSLAMM v10.2.1
2.) = Cells That Require Data Input.

Pre-Development Infiltration Calculations:

1.) Pre-development Project Site Area = 0.299 acres

0.299 acres * (43,560 sq. ft./1 acre) = 13,024 sq. ft.

2.) Pre-development runoff volume = 1,985 cu. ft.

3.) Pre-development runoff depth = (1,985 cu. ft. / 13,024 sq. ft.)

= 0.15 ft.
= 1.83 in.

4.) Pre-development stay-on depth = (28.81 in. - 1.83 in.)

= 26.98 in

Target Post-Development Stay-On Depth = 100% of Pre-Development Stay-On Depth

5.) Target Post-development stay-on = (26.98 in. * 1)

= 26.98 in.

Post-Development Infiltration Calculations:

1.) Post-development Project Site Area = 0.299 acres

0.299 acres * (43,560 sq. ft./1 acre) = 13,024 sq. ft.

2.) Post-development runoff volume = 4,726 cu. ft. (Only one year of modeling - MAD 1981)

3.) Post-development runoff depth = (4,726 cu. ft. / 13,024 sq. ft.)

= 0.36 ft.
= 4.35 in.

Post-Development Infiltration Calculations (Continued):

4.) Post-development stay-on depth = (28.81 in. - 4.35 in.)

= **24.46 in**

5.) Post-development stay-on percentage as compared to pre-development stay-on:

= (24.46 in. / 26.98 in.)
= **90.6%**

The post-development project site infiltrates approximately **90.6%** of the pre-development infiltration volume.